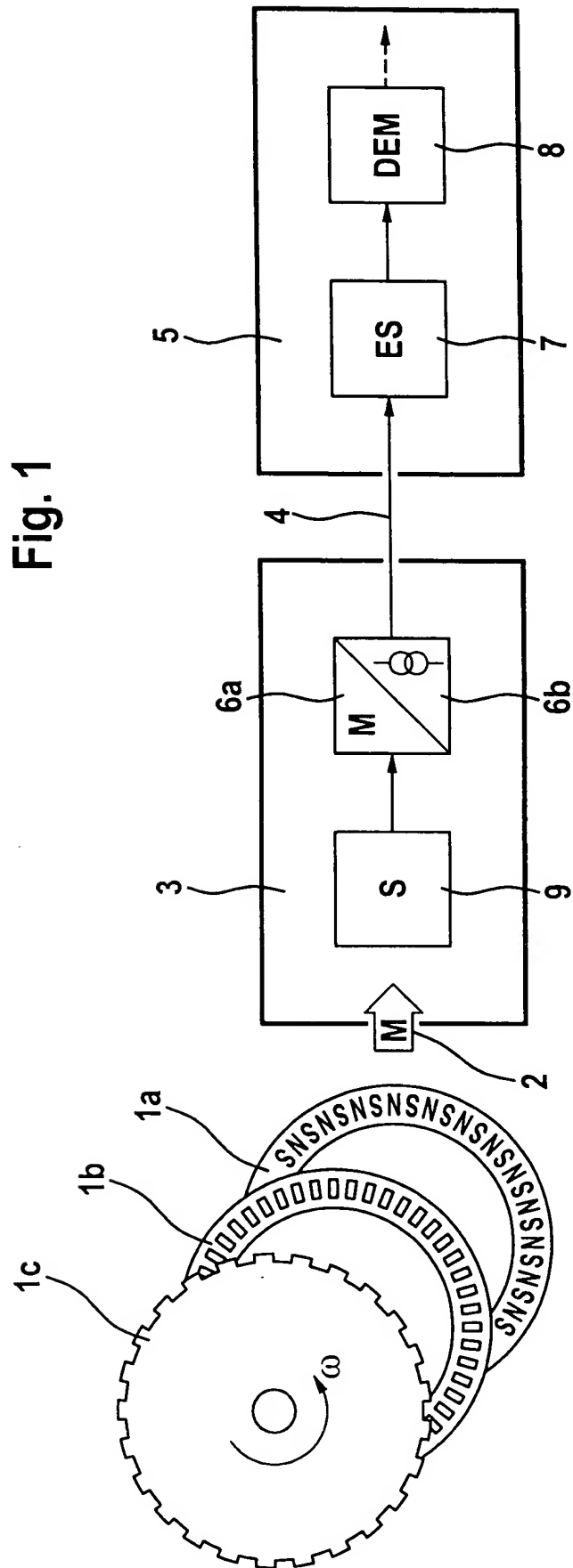


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Fig. 1



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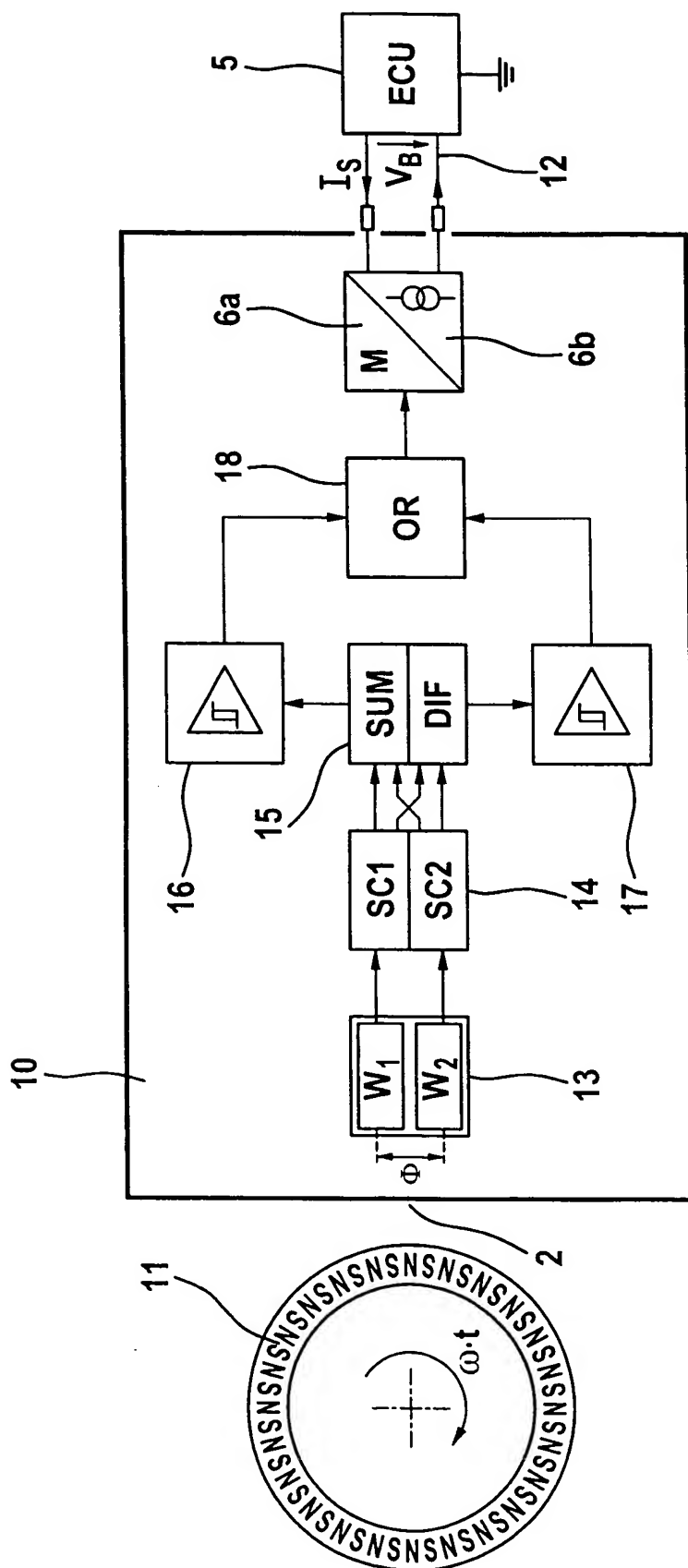


Fig. 2

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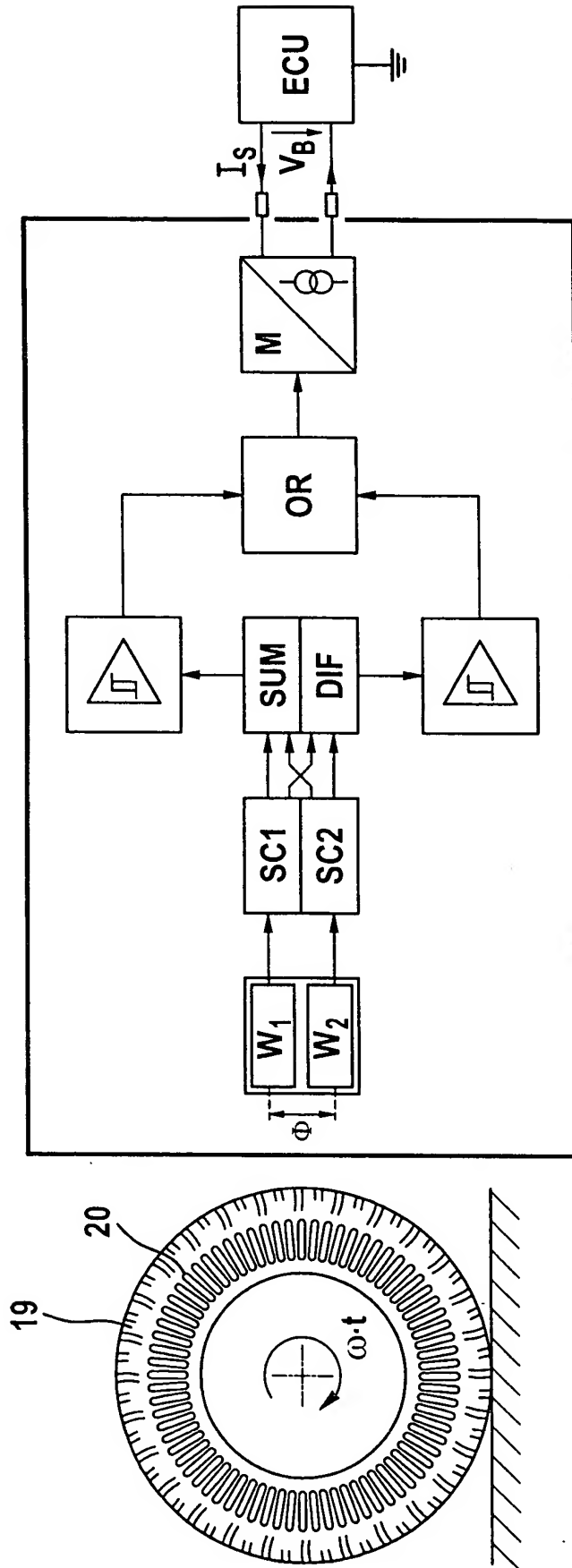


Fig. 3

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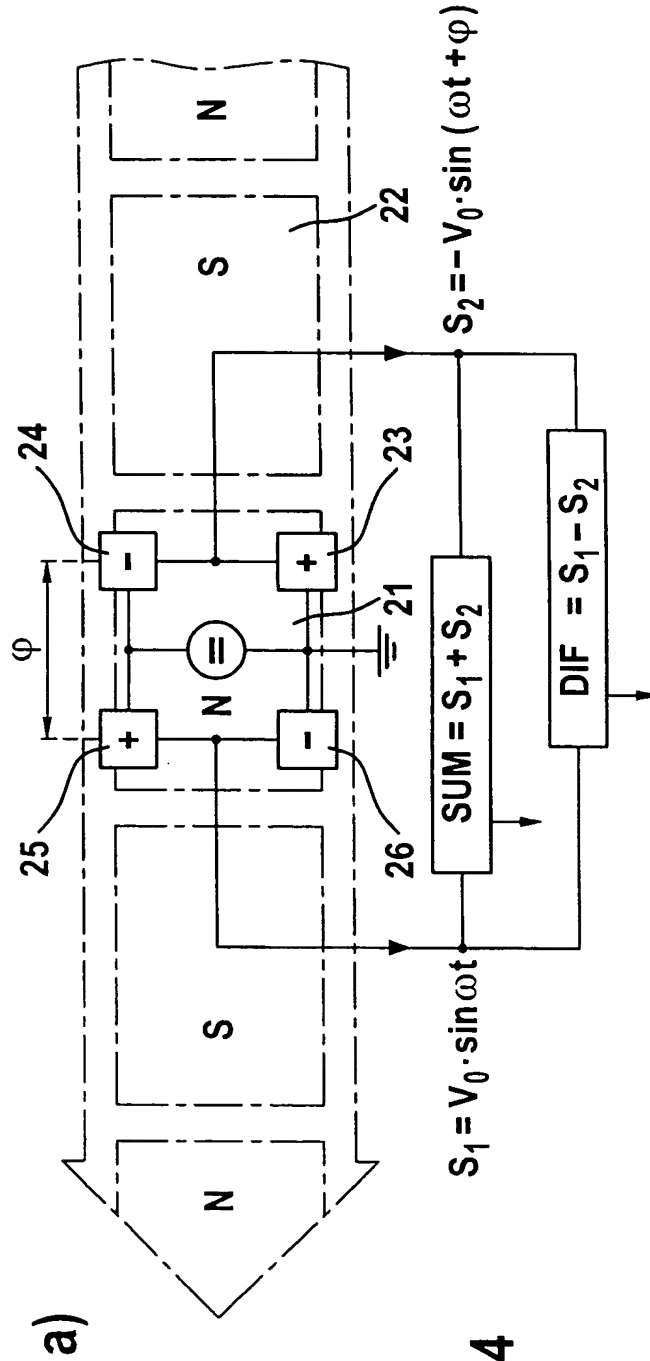


Fig. 4

b)

$$\begin{aligned} SUM &= S_1 + S_2 \sim (\sin \omega t - \sin (\omega t + \varphi)) \\ DIF &= S_1 - S_2 \sim (\sin \omega t + \sin (\omega t + \varphi)) \\ DIF &= 0 \quad \omega t = -\frac{\varphi}{2} \end{aligned}$$

$$\frac{dSUM}{d\omega t} \left(-\frac{\varphi}{2} \right) = 0 \quad \text{EXTREMUM}$$

EXTREME VALUE

$$\frac{d^2 SUM}{d(\omega t)^2} \left(-\frac{\varphi}{2} \right) \approx +2 \omega \cdot \sin \frac{\varphi}{2} \quad \text{MINIMUM}$$

c)

$$\begin{aligned} SUM &= S_1 + S_2 \sim (\sin \omega t - \sin (\omega t - \varphi)) \\ DIF &= S_1 - S_2 \sim (\sin \omega t + \sin (\omega t - \varphi)) \\ DIF &= 0 \quad \omega t = +\frac{\varphi}{2} \end{aligned}$$

$$\frac{dSUM}{d\omega t} \left(+\frac{\varphi}{2} \right) = 0 \quad \text{EXTREMUM}$$

EXTREME VALUE

$$\frac{d^2 SUM}{d(\omega t)^2} \left(+\frac{\varphi}{2} \right) \approx -2 \omega \cdot \sin \frac{\varphi}{2} \quad \text{MAXIMUM}$$

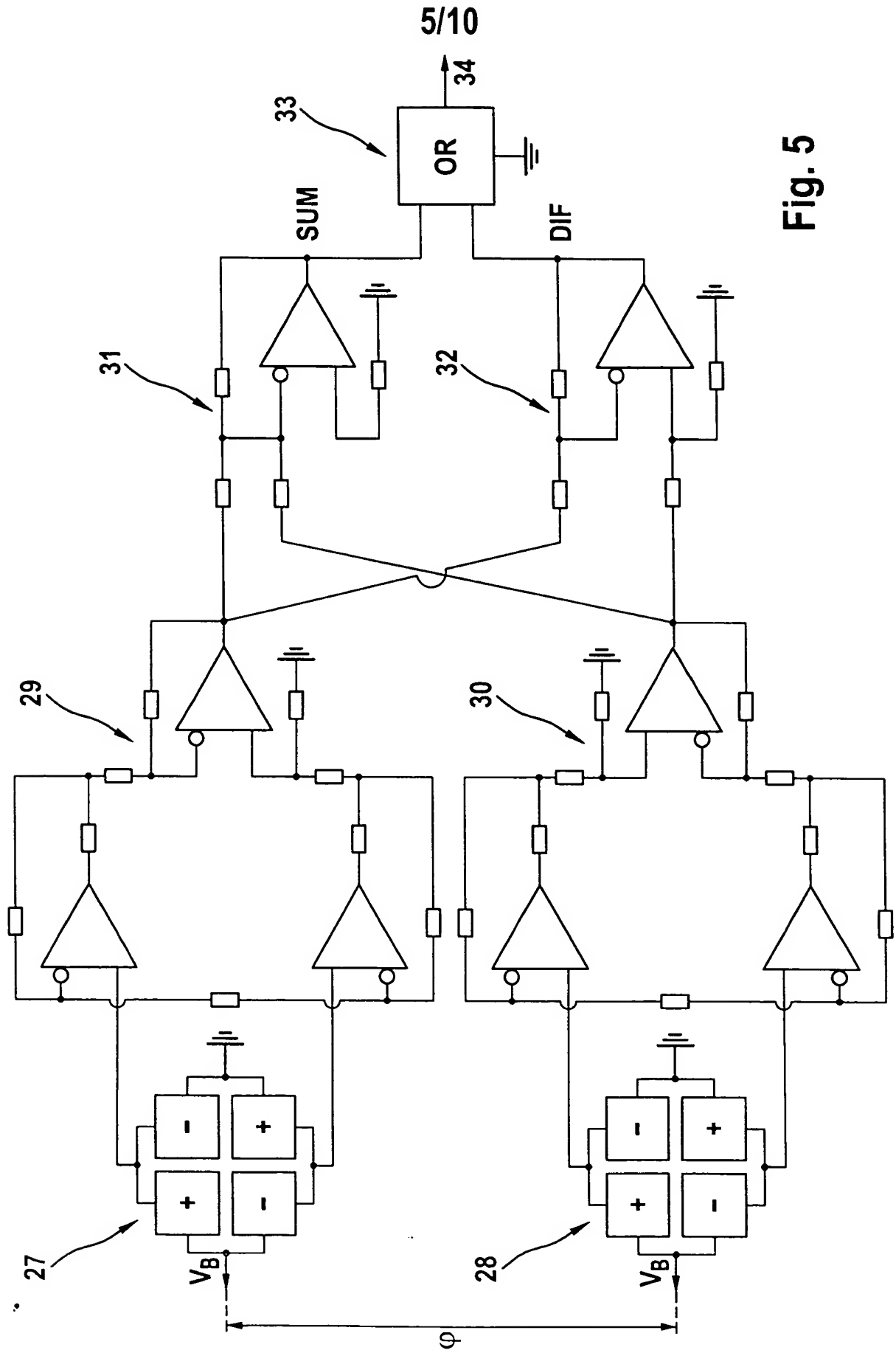
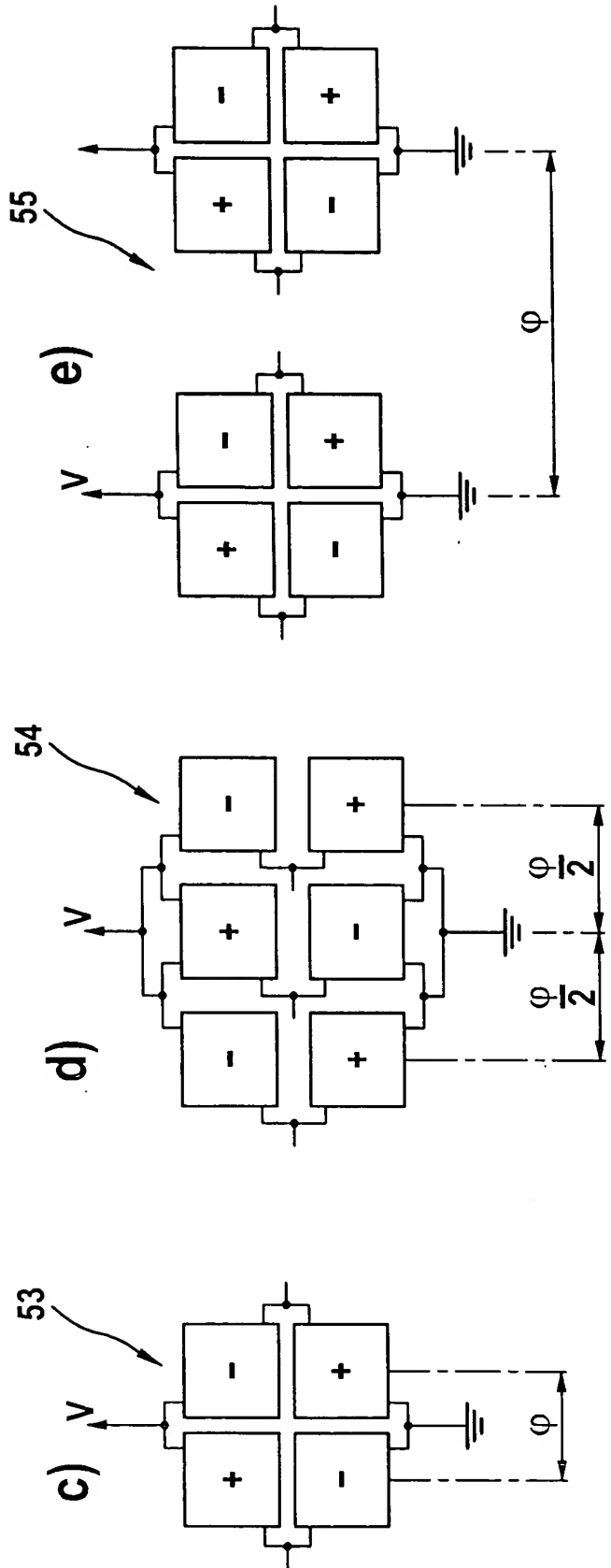
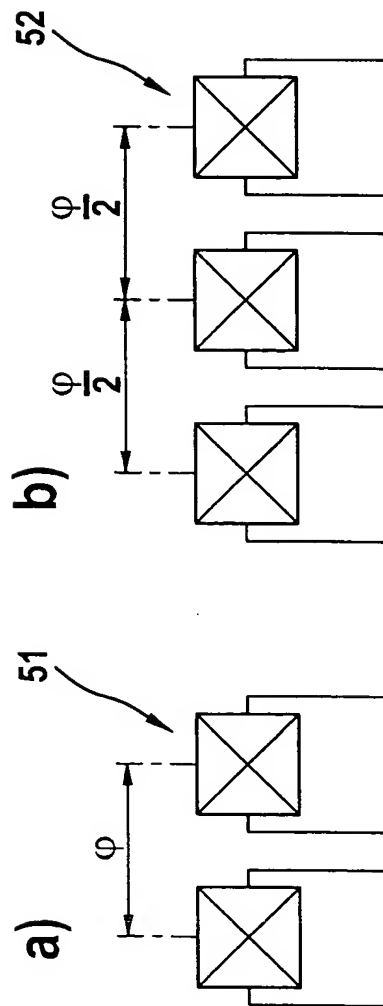


Fig. 5

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Fig. 6



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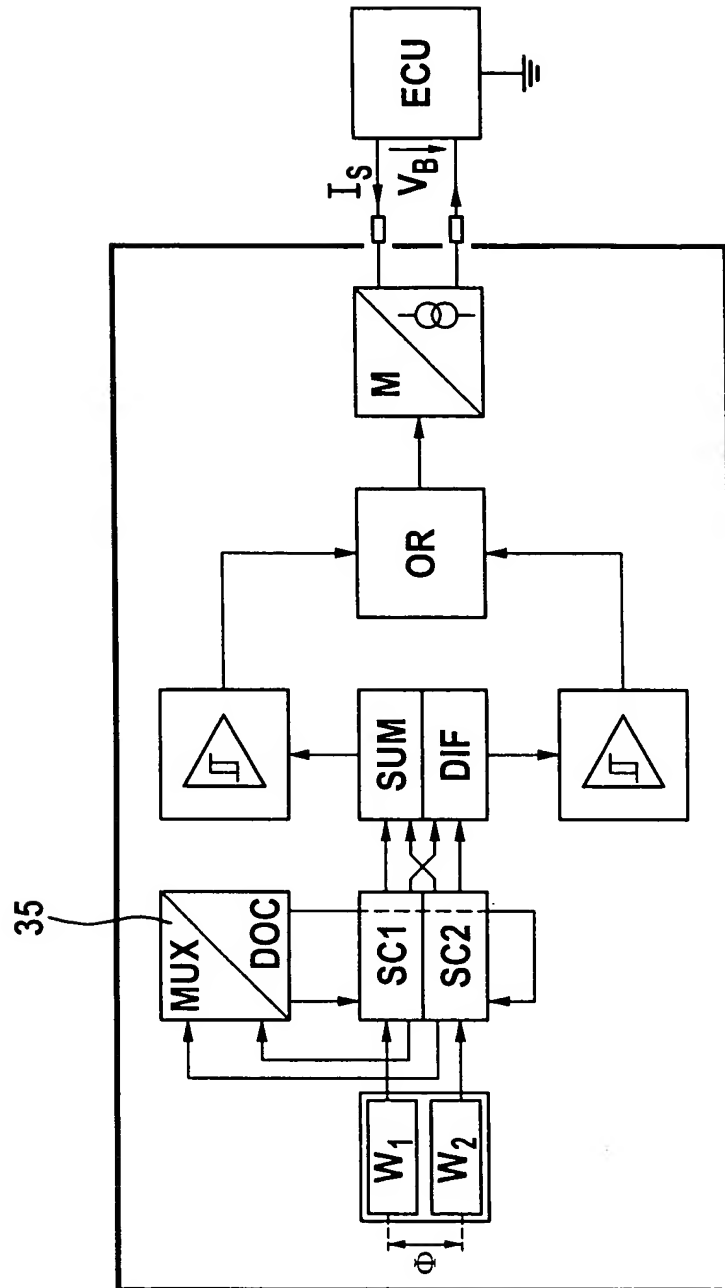


Fig. 7

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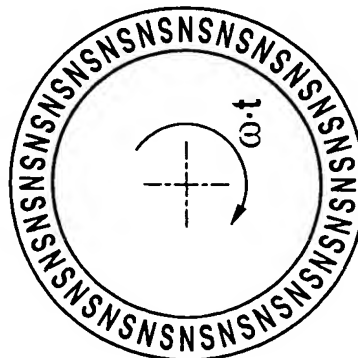
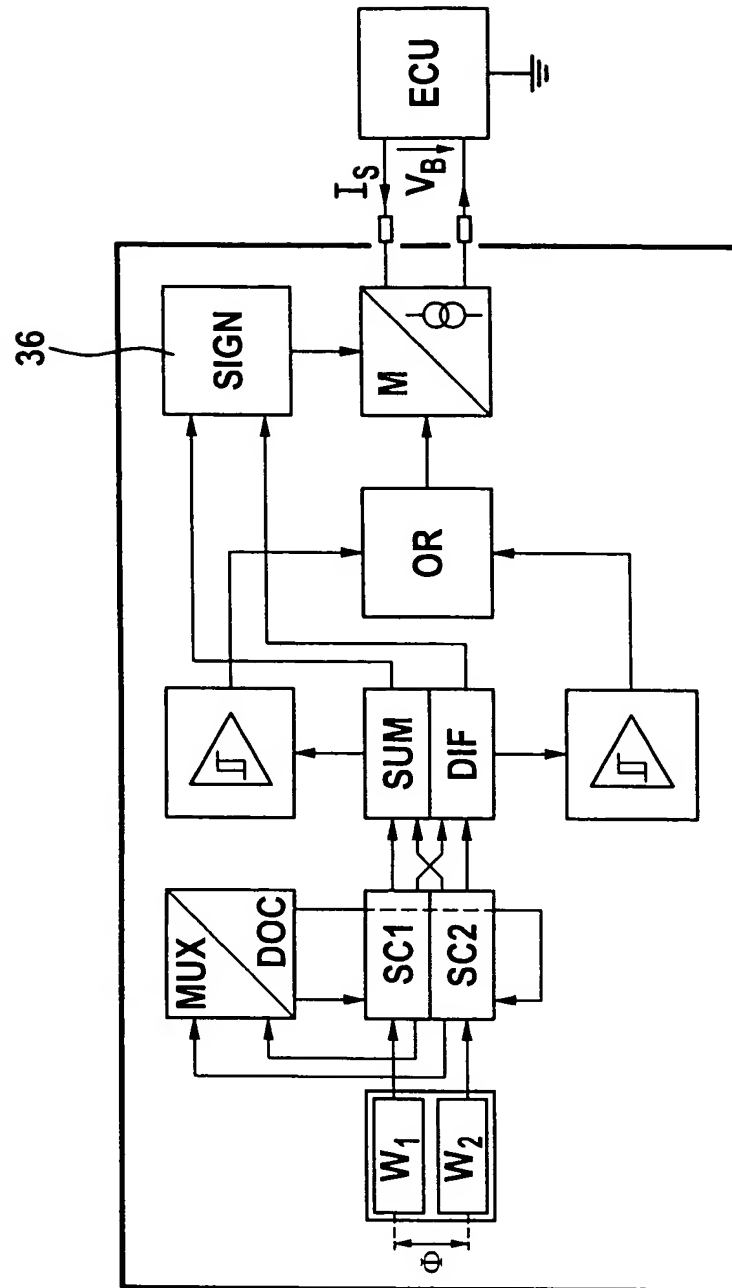


Fig. 8

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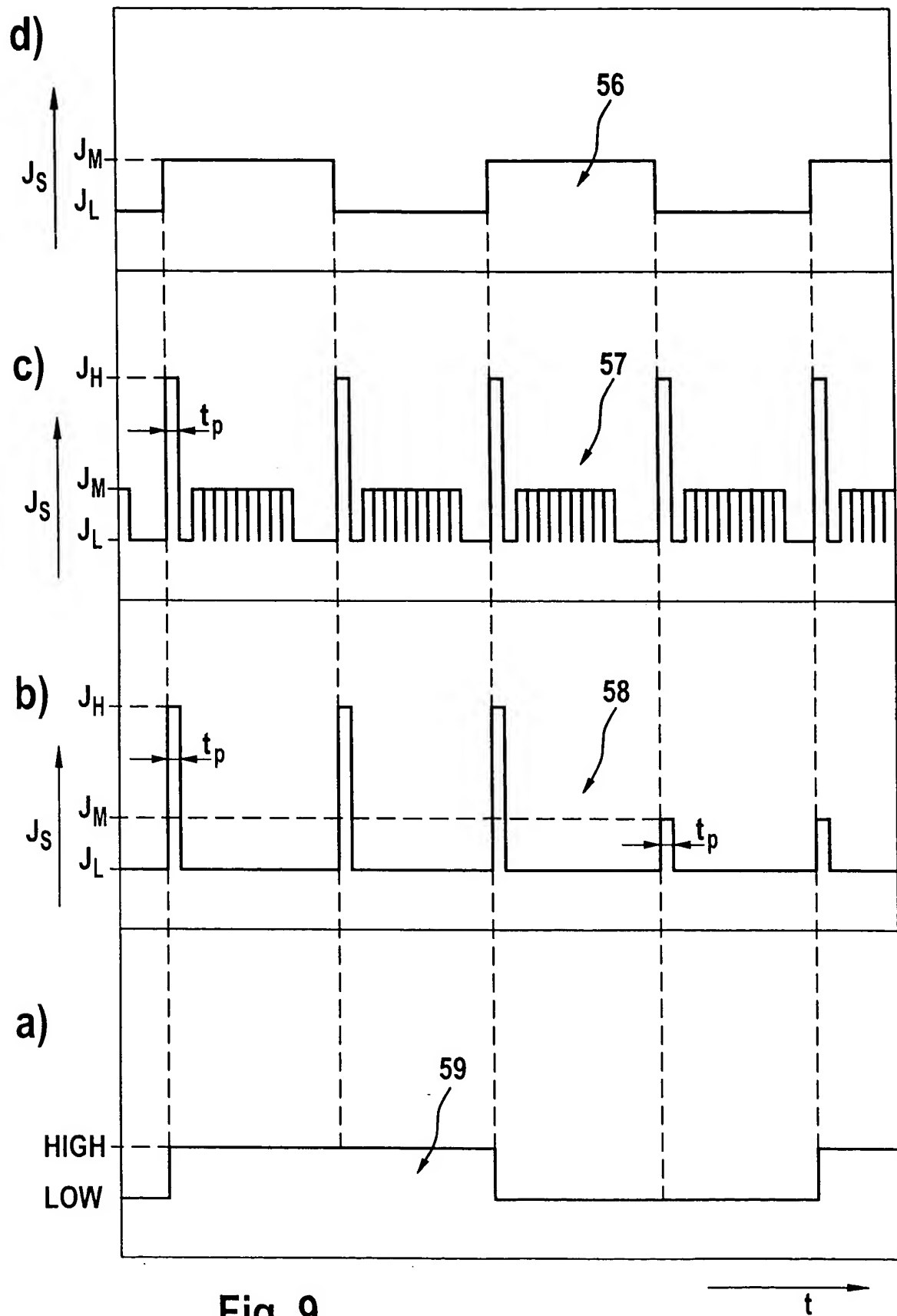


Fig. 9

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Fig. 10

